

REMARKS

Claim 13 and 15 have been cancelled and claim 8 has been amended. Claims 2-12, 14 and 16-21 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

6. The specification currently stands objected to for informalities.

The specification has been amended.

8-9. Claims 2-4, 6, 8-12 and 14-17 currently stand rejected for allegedly being anticipated by U.S. Patent 5,700,559 to Sheu (hereinafter "Sheu").

Claim 8

As amended claim 8 recites a method for immobilizing biomolecules on a surface. The method includes the steps of "*applying a layer of a hydrophobic polymer to the surface, and immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting.*" (emphasis added, cl. 8). Sheu fails to disclose the steps of (i) applying a layer of hydrophobic polymer and (ii) immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting.

Sheu discloses a hydrophilic article which includes a substrate, an ionic polymeric layer on the substrate, and a disordered polyelectrolyte coating which is ionically bonded to the ionic polymeric layer (see col. 1, lines 16-20). The polymeric layer may be hydrophobic or hydrophilic (col. 1, lines 34-35). Shue at col. 2, lines 26-29 shows that the polyelectrolyte coating absorbs a drop of water in less than one second. Thus the polyelectrolyte coating is hydrophilic (col. 1, line 16). If drops of liquids which contain different biomolecules would be applied on different

positions of the polyelectrolyte coating, the drops of liquid would be absorbed by the polyelectrolyte coating and the biomolecules allocated to one of the spots could get into contact with biomolecules of another spot. Significantly, that is a problem which claimed invention avoids.

Sheu discloses providing an article with a biocompatible surface. Sheu fails to disclose immobilizing of biomolecules. Although in column 2, line 21 Sheu says that the article can be a bioreactor microcarrier, such a bioreactor is normally used for bacteria and not for biomolecules. The biomolecules of the present application are not comparable with the polyelectrolyte coating. The polyelectrolyte coating is a polymer which shows electric charge. However, a biomolecule is a macromolecule.

A 35 U.S.C. §102(b) rejection requires a single prior art reference this discloses each element of the claimed invention. Shue is incapable of anticipating claim 8 since it fails to disclose immobilizing biomolecules, and more specifically immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting.

10. Claims 2, 5, 8-10, 13, 15 and 17-20 currently stand rejected for allegedly being anticipated by U.S. Patent 5,465,151 to Wybourne (hereinafter “Wybourne”).

Claim 8

As amended claim 8 recites a method for immobilizing biomolecules on a surface. The method includes the steps of *“applying a layer of a hydrophobic polymer to the surface, and immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting.”* (emphasis added, cl. 8). Wybourne fails to disclose the steps of (i) applying a layer of hydrophobic polymer and (ii) immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting. A 35 U.S.C. §102(b) rejection requires a single prior art reference this discloses each element of the claimed invention. Wybourne is incapable of anticipating claim 8 since it fails to disclose immobilizing biomolecules, and more specifically immobilizing the biomolecules on a surface of the layer of *hydrophobic polymer by spotting.*

11-13. Claims 7, 8, 15 and 21 currently stands rejected for allegedly being obvious in view of U.S. Patent 6,560,471 to Heller (hereinafter “Heller”) and U.S. Published Application 2003/0108879 to Klaerner (hereinafter “Klaerner”).

Claim 8

As amended claim 8 recites a method for immobilizing biomolecules on a surface. The method includes the steps of *“applying a layer of a hydrophobic polymer to the surface, and immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting.”* (emphasis added, cl. 8). The Official Action acknowledges that Heller “...fails to disclose that the polymeric matrix of the sensing layer is a hydrophobic polymer layer.” (Official Action, pg. 9). However, the Official Action then contends Klaerner teaches a hydrophobic polymer layer

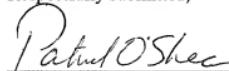
and that a skilled person would have modified Heller based upon the teachings of Klaerner in order to provide a more stable sense.

Assuming for a moment without admitting that Heller and Klaerner are even properly combinable, the resultant combination still fails to render obvious the claimed invention, which now recites the step of "immobilizing the biomolecules on a surface of the layer of hydrophobic polymer by spotting" (emphasis added, cl. 8). Thus claim 8 is patentable over the combined teachings of Heller and Klaerner.

For all the foregoing reasons, reconsideration and allowance of claims 2-12, 14 and 16-21 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,



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